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# Investigation of Peer Relationships of Children with and without Special Needs in the Preschool Period

## Abstract

*This study aimed to compare the peer relationships of preschool children with special needs with their peers without special needs, to determine whether the special needs variable predicts the peer relationships of children or not, and examine the peer relationships of children with special needs in terms of gender and age variables. 56 preschool teachers and a total of 112 children, 56 with special needs and 56 without special needs, were enrolled in the study. The data were collected by using the Information Form and the Child Behavior Scale (CBS). The results of the study indicated that there were statistically significant differences between the children with and without special needs in prosocial behaviors, asocial behaviors, anxious-fearful behaviors, and hyperactivity behaviors subscale scores. However, there was no significant difference between aggression and exclusion behavior subscale scores. It is observed that being with special needs significantly predicts prosocial behaviors in favor of children without special needs, and asocial, anxious-fearful and hyperactivity behaviors in favor of children with special needs. Furthermore, it was determined that gender and age variables do not create a statistically significant difference in the peer relationships of children with special needs. The findings of the study support the requirement to develop effective intervention programs which will increase the peer relationships and peer acceptance of children with special needs in preschool inclusive classes.*

*Keywords: Early childhood education, preschool period, inclusion, peer relations, children with and without special needs.*

## Introduction

Peer relationships can be defined as a whole of interactions and actions that show continuity between individuals who have reached the same age, level of development or maturity and share a similar life history, value, lifestyle and social context (Gülay, 2010). Peer relationships differ in the way of friendship, being accepted and being rejected by peers, and exposure to the violence of peers (Sali, 2014). The social environment in which children are involved, individual characteristics (social skills, aggression, bullying) and interaction with each other shape the structure of peer relationships (Gülay, 2009). In addition to the individual characteristics of children, peer support and power balance/imbalance also shape the structure of peer relationships. On the other hand, peer groups of children are both affected by adults and have the ability to influence them (Gülay,

2009; Rodkin & Hodges, 2003). It is stated that the positive relationships of children with their teachers have a positive effect on peer relationships (Gülay-Ogelman, Körükçü & Ersan, 2015).

Peer acceptance is defined as the child's being accepted and loved by the peer group in which he/she is included. Children accepted by their peers in the preschool period are more liked and preferred by their peers, exhibit fewer behavioral problems, have more friends and are more willing to participate in school activities (Gülay, 2010; Ladd & Profilet, 1996; Sali, 2014). While children accepted by their peers are not exposed to peer violence, children rejected by their peers may be exposed to peer violence more (Gülay, 2010). It was determined that children who were not by their peers were neglected and rejected by their peers more (Harrits, Zaia, Bates, Dodge & Petit, 1997). It was

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determined that children with prosocial behaviors were more loved and accepted by their peers (Ladd & Profilet, 1996). On the other hand, children who exhibit aggressive behaviors are less accepted by their peers (Beyazkürk, Anlıak & Dinçer, 2007).

Farmer (2000) defined peer rejection as the child's not or little being loved by the peers. Children rejected by their peers in the preschool period are excluded by their peers, and they are not liked very much (Gülay, 2011a). In children rejected by their peers, many behavioral problems such as aggression, being fearful and anxious, non-social behaviors, bullying, etc. can be observed (Gülay, 2009). In children who are rejected by their peers in the preschool period, problems such as dropping out the school, academic failure, and continuation of peer rejection in later years may be observed (Beyazkürk et al., 2007; Parker & Asher, 1987; Roberts & Zubrick, 1992).

Characteristics related to the child are the leading ones among the factors which affect the friendship relationships of preschool children. The age, gender, being with or without special needs, cognitive, linguistic and emotional skills of children affect their peer relationships (Gülay, 2010). Being with special needs is argued as one of the important factors affecting the peer relationships of children. Guralnick, Connor, Hammond, Gottman & Kinnish (1996a; 1996b) stated that when children with special needs are compared with their peers without special needs, they are involved in less social interaction and exhibit more negative interaction styles. As a result of the study which was conducted by Guralnick, Hammond, Connor & Neville (2006) and in which they monitored the peer relationships of 4-6-year-old children with special needs for two years, they revealed that children with special needs experienced social competence problems, could not interact with their peers, and had deficiencies in the social knowledge process and emotional order skills. Children with special needs may be deprived of the most basic social skills depending on the type and degree of deficiencies they have, and this may cause children with special needs to experience difficulties in peer relationships (Gülay, 2010). As a result of this, children with special needs experience problems such as rejection by their peers, inability to make friends and exposure to peer violence (Çifci & Sucuoğlu, 2003; Gülay, 2010). Therefore,

a successful inclusive program in the preschool period is important for children with special needs in terms of their being together with their peers, interacting with them and developing their peer relationships in this way. One of the variables that play a role in peer relationships in the preschool period is the genders of children. The effect of gender on peer relationships is observed on the aggressive behaviors of children. There are differences between boys and girls in terms of the type and frequency of aggressive behaviors. Boys are more aggressive when compared to girls (Bierman, 2005; Gülay, 2011b; Kostilnek, Whirlen, Soderman & Gregory, 2005). Furthermore, age differences are another variable affecting peer relationships. With the growth of children, their problem behaviors decrease, and their social skills develop. Age-related experience and increased maturation can lead to successful peer relationships in children (Gülay, 2011b). In addition to the variables related to children (social skills, problem behaviors, self-regulation, temperament, and preschool education duration) that may affect the peer relationships of preschool children, the variables related to the teacher, school and the family also have an influence on peer relationships (Gülay, 2010).

To receive education together with their peers without special needs in the preschool period is observed as a unique opportunity for children with special needs that will ensure significant acquisitions (Bruder, 2010; Henninger, Gupta & Vinh, 2014). Preschool inclusive environments are important regarding the integration of children with special needs into society (Both & Ainscow, 2002), support of their development in the early period (Odom, Vitztum, Wolery, Lieber, Sandall, Hanson & Horn, 2004), normally developed peers' becoming a model for skills (Guralnick, 2001), the establishment of qualified interactions with adults and peers in order for children with special needs who participate in inclusive practices to benefit from preschool education in the best way (Bakkaloğlu, Sucuoğlu & Özbek, 2017; Odom et al., 2004;). Moreover, children without special needs develop positive attitudes towards their peers with special needs with whom they are found in the same environment and get information about developmental disabilities (Diamond & Huang, 2005).

When the literature was examined, it was determined that children with special needs were less accepted and more rejected in preschool inclusive environments in comparison with their peers without special needs (Baydık & Bakkaloğlu, 2009; Çulhaoğlu-İmrak & Sığırtmaç, 2011; Eratay & Sazak-Pınar, 2006; Küçükler, Erdoğan & Çürük, 2014; Odom, Zercher, Li, Marguet, Sandall & Brown, 2006; Roberts & Zubrick, 1992; Stone & La Greca, 1990; Şahbaz, 2004; Vuran, 2005). Research also displays that in inclusive environments children with special needs tend to make fewer friends or even not to make any friends, have negative experience in peer relationships, are excluded and left alone, and tend to interact with other children with special needs (Guralnick, 1995; Kemp & Carter, 2002; Larri-vee & Horne, 1991; Pijl, Frostad & Fleming, 2008).

The first laws and practices related to preschool inclusive education in Turkey started in 1983, and since then, the placement of children with special needs in general education classes has been accelerated (Sucuoğlu, 2004). In 1997, with the Special Education Law No. 573 (Ministry of National Education, 1997), 37-66-month-old preschool period children with special needs were obliged to be placed in schools, where their peers without special needs were educated, and there was a rapid increase in the number of children with special needs in general education schools (Ministry of National Education, 2013). Despite all these legal regulations, important problems in preschool inclusive practices both in terms of quality and quantity are experienced in Turkey. Preschool children with special needs are found in the same environment with their peers without special needs only physically, and this does not provide social acceptance of children with special needs, prevents them from learning together with their peers and also from learning from their peers, which is the main aim of inclusion, and therefore affects the achievement of inclusion adversely. Hence, to examine the peer relationships of children is considered important in terms of the studies that aim to increase the effectiveness of inclusive practices.

It is observed that some studies on the peer relationships of preschool children were conducted in Turkey (Gülay, 2008; Gülay 2009; Gülay, 2011a; Gülay, 2011b; Gülay-Ogelman & Erten, 2013; Sali, 2014;

Seçer et al., 2012; Yüce, 2015; Uluyurt, 2012). However, there were only two studies that examined the peer relationships of children with special needs in the preschool period (Çulhaoğlu-İmrak & Sığırtmaç, 2011; Yüce, 2015). Therefore, the aim of this study is to examine the peer relationships between children with and without special needs, who are educated in the inclusive environment in the preschool period. Depending on the general aim of the study, answers to the following questions were sought.

1. Do the peer relationship scores of children with special needs demonstrate a difference according to their gender?
2. Do the peer relationship scores of children with special needs demonstrate a difference according to their age?
3. Is there a significant difference between the peer relationship scores of children with and without special needs?
4. Does the state of being with special needs significantly predict the children's peer relationships?

## Methods

### *Research Design*

This research is a causal comparative study which examines the peer relationships of children with and without special needs in the preschool classes where inclusive practices are carried out according to the variables of being with special needs, age and gender. Causal comparative studies are the studies which aim to determine the causes or consequences of the difference between the groups of people (Fraenkel, Walley & Hyun, 2012). This research is also a correlational study in terms of determining the relation between the friendship relationships of children with and without special needs and being with special needs. Correlational studies are the studies that examine the relationship between variables and the effects of one or more variables on another variable (Mertens, 2010).

### *Study Group*

56 pre-school teachers from 22 independent kindergartens participated in the study. The demographic characteristics of the teachers who participated in the study are presented in Table 1. Upon examining Table 1, it is observed that approximately half of the teachers are under 35 years of age, more than half of the teachers have more

than 10 years of experience, and all of them have bachelor's degree. When the completed data collection tools were examined and the scales containing missing items were removed, it was observed that 56 teachers who participated in the study completely filled in the data collection tools for a total of 112 children, 56 of whom were with special needs and 56 of whom were without special needs. In the comparison of the peer relationships of the children with and without special need, a total of 112 children, 56 with

special needs and 56 without special needs, were included. In the determination of the children without special needs who participated in the study, one child in each class, who was in the same class with the children with special needs and who was selected by the random method, was included in the study. Table 2 presents information about children participating in the study.

**Table 1.**  
*Demographic characteristics of the teachers*

Variables		N	%
Age (years)	Between the age of 26-35	27	48.2
	Over 35 years of age	29	51.8
	Total	56	100.0
Experience (years)	1-10 years	21	37.5
	Over 10 years	35	62.5
	Total	56	100.0
Graduation status	Bachelor's Degree	56	100
	Master's Degree	-	-
	Total	56	100.0

**Table 2.**  
*Demographic characteristics of the children in the study group*

Variables		Children with special needs		Children without special needs	
		N	%	N	%
Gender	Girl	32	57.1	30	53.6
	Boy	24	42.9	26	46.4
	Total	56	100	56	100
Age	5	16	28.6	20	35.7
	6	40	71.4	36	64.3
	Total	56	100.0	56	100.0

#### *Data Collection Tools*

The Information Form and the Child Behavior Scale were used to collect data in the study.

#### *Information form*

This form developed by the researcher was used to determine the demographic characteristics of the children and teachers in the study group.

#### *Child Behavior Scale*

The original form of the scale was developed by Ladd & Profilet in 1996 to evaluate the peer relationships of preschool children at school. The adaptation of the scale to Turkish was performed by Gülay (2008). The scale consists of 6 subscales representing various variables, including aggressive behavior, prosocial behavior, asocial behavior, exclusion, being anxious-fearful, and

hyperactivity. All items are evaluated with the statements of "Not Appropriate," "Sometimes Appropriate," and "Completely Appropriate." 0 points are given to the response of "Not Appropriate," 1 point is given to the response of "Sometimes Appropriate," and 2 points are given to the response of "Completely Appropriate." In the scale, a general total score is not mentioned due to the structure of the subscales. Each subscale is evaluated within itself. The total scores obtained from the subscales indicate how often the behavior that the scale represents occurs (Gülay, 2008). The Cronbach's alpha internal consistency coefficient of the Turkish version of the scale was found to be .87 for aggressive behaviors, .91 for prosocial behaviors, .84 for asocial behaviors, .89 for exclusion behaviors, .78 for anxious-fearful behaviors, and .82 for hyperactivity behaviors. The Cronbach's alpha

internal consistency coefficients of the CBS, calculated for this study sample, were .81 for aggressive behaviors, .88 for prosocial behaviors, .79 for asocial behaviors, .82 for exclusion behaviors, .85 for anxious-fearful behaviors, and .74 for hyperactivity behaviors (n=112). The total score obtained from the subscales indicates how often the child exhibits that behavior.

#### Data Collection

Firstly, in order to carry out the study in independent kindergartens affiliated to the Ministry of National Education, permissions from Malatya, Bolu and Gaziantep National Education Directorates were taken, later the school administrators were contacted by phone, and they were informed about the study. The teachers of the classes which could participate in the study were determined, and the teachers were interviewed by appointment. In the interviews, the teachers were asked to fill in the data collection tools for children with and without special needs in their classes, and the filled data collection tools were received one week later.

#### Data Analysis

To test the data for the purposes of the study, the Kolmogorov-Smirnov [K-S] test was used in testing the assumption of normality, and Levene statistics were used in testing the homogeneity of the data set. The results of the Kolmogorov-Smirnov test indicated the normal distribution of data [ $p > .05$ ], and the results of Levene's test

indicated the homogeneous distribution of variances [ $F=1.197$ ;  $p=.276$ ]. Accordingly, the t-test was used for unrelated samples in determining the peer relationships according to being with special needs, age, and gender, and the effect size was also calculated in this analysis. In the interpretation of the effect size, the eta square value of .01 was determined as the low effect size, .06 as the medium effect size, and .14 as the large effect size (Köklü, Büyüköztürk & Çokluk-Bökeoğlu, 2007). Whether being with special needs predicts the peer relationships of children with and without special needs significantly was checked by using simple linear regression analysis (Büyüköztürk, 2005).

#### Results

##### *Results related to the comparison of the CBS scores of the children with special needs according to the gender variable*

The results of the t-test, which was conducted in order to determine whether the scores obtained by the children with special needs from the subscales of the CBS scale differentiate according to the gender variable, are presented in Table 3. When Table 3 was examined, it was determined that the peer relationship sub-scale scores of the children with special needs were not significantly different according to the gender variable.

**Table 3.**

*The t-test results related to the comparison of the CBS scores of children with special needs according to gender*

CBS	Gender	N	X	ss	sd	t	p
Prosocial behavior	Girl	32	7.06	4.14	54	-.458	.649
	Boy	24	7.58	4.30			
Asocial behavior	Girl	32	6.59	3.68	54	.956	.344
	Boy	24	5.66	3.45			
Exclusion behavior	Girl	32	5.25	3.28	54	-.631	.531
	Boy	24	5.87	4.13			
Anxious-fearful behavior	Girl	32	8.00	3.92	54	.650	.518
	Boy	24	7.25	4.69			
Hyperactivity	Girl	32	4.68	2.20	54	1.931	.059
	Boy	24	3.54	2.18			
Aggressive behaviors	Girl	32	4.37	3.66	54	.700	.487
	Boy	24	3.75	2.75			

\* $p < .05$

*Results related to the comparison of the CBS scores of children with special needs according to the age variable*

The results of the t-test, which was conducted in order to determine whether the scores obtained by the children with special

needs from the subscales of the CBS scale differentiate according to the age variable, are presented in Table 4. When Table 4 was examined, it was determined that the peer relationship sub-scale scores of the

children with special needs were not significantly different according to the age variable.

**Table 4.**

*The t-test results related to the comparison of the CBS scores of the children with special needs according to age*

CBS	Age	N	X	ss	sd	t	p
Prosocial behavior	5	16	6.75	4.43	54	-.602	.550
	6	40	7.50	4.12			
Asocial behavior	5	32	6.25	4.10	54	.070	.944
	6	24	6.17	3.41			
Exclusion behavior	5	32	5.50	2.44	54	-.023	.982
	6	24	5.52	4.05			
Anxious-fearful behavior	5	32	7.25	4.58	54	-.474	.637
	6	24	7.85	4.15			
Hyperactivity	5	32	4.56	2.73	54	.767	.447
	6	24	4.05	2.05			
Aggressive behaviors	5	32	4.56	2.92	54	.652	.517
	6	24	3.92	3.44			

\*p<.05

*The results related to the comparison of the CBS scores of the children with special needs according to being with special needs*

The results of the t-test for the unrelated samples, which was conducted in order to determine whether the scores obtained by the children with and without special needs from the subscales of the CBS scale differentiate, are presented in Table 5. When Table 5 is examined and the peer relationships of children with and without special needs are compared by using the t-test, a statistically significant difference is observed

between the prosocial behaviors, asocial behaviors, anxious-fearful behaviors and hyperactivity behaviors of children with and without special needs, but there is not any difference in the aggressiveness and exclusion subscale scores. When Table 5 was examined, the effect size was calculated as  $\eta^2=.07$  for prosocial behaviors, as  $\eta^2=.07$  for asocial behaviors, as  $\eta^2=.04$  for fearful/anxious behaviors, and as  $\eta^2=.09$  for hyperactivity behaviors. The effect size values obtained for prosocial behaviors, asocial behaviors, exclusion behaviors, and hyperactivity behaviors were determined to be at a low level.

**Table 5.**

*The t-test results related to the comparison of the CBS scores of children according to being with special needs*

CBS	Special Need	N	X	ss	sd	t	p	$\eta^2$
Prosocial behavior	With	56	7.28	4.18	110	-2.793	.006	.07
	Without	56	9.92	5.71				
Asocial behavior	With	56	6.19	3.58	110	2.694	.008	.07
	Without	56	4.53	2.89				
Exclusion behavior	With	56	5.51	3.64	110	.772	.442	
	Without	56	4.96	3.93				
Anxious-fearful behavior	With	56	7.67	4.24	110	2.260	.026	.04
	Without	56	5.71	4.92				
Hyperactivity	With	56	4.19	2.25	110	3.161	.002	.09
	Without	56	2.94	1.92				
Aggressive behaviors	With	56	4.10	3.29	110	1.803	.074	
	Without	56	3.03	2.99				

\*p<.05

*The results of the Simple Linear Regression Analysis with regard to predicting the peer relationships of children by being with special needs*

When Table 6 is examined, it is observed that being with special needs significantly predicts prosocial behaviors [ $R^2 = .066$ ,  $F(1,111) = 7.803$ ] in favor of children without special needs. Again, it is observed that being with special needs significantly predicts asocial behaviors [ $R^2 = .062$ ,  $F(1,111) = 7.256$ ], anxious and fearful behaviors [ $R^2 = .044$ ,  $F(1,111) = 5.106$ ] and hyperactivity

behaviors [ $R^2 = .083$ ,  $F(1,111) = 9.991$ ] separately in favor of children with special needs. It is observed that being with special needs does not significantly predict the exclusion behaviors [ $R^2 = .005$ ,  $F(1,111) = .597$ ] and the aggressive behaviors [ $R^2 = .029$ ,  $F(1,111) = 3.252$ ]. Being with special needs explains 6% of prosocial behaviors, 6% of asocial behaviors, 4% of fearful and anxious behaviors, and 8% of hyperactivity behaviors. Being with special needs predicts the hyperactivity behavior at most and the exclusion behavior at least.

**Table 6.**

*The results of the Simple Linear Regression Analysis with regard to predicting the peer relationships of children by the status of being with special needs*

Variable	$\beta$	t	p
Prosocial behaviors R = .257 R <sup>2</sup> = .066 F = 7.803	-.257	-2.793	.006
Asocial behaviors R = .249 R <sup>2</sup> = .062 F = 7.256	.249	2.694	.008
Exclusion behaviors R = .073 R <sup>2</sup> = .005 F = .597	.073	.772	.442
Anxious-fearful behaviors R = .211 R <sup>2</sup> = .044 F = 5.106	.211	2.260	.026
Hyperactivity R = .289 R <sup>2</sup> = .083 F = 9.991	.289	3.161	.002
Aggressive behaviors R = .169 R <sup>2</sup> = .029 F = 3.252	.169	1.803	.074

## Discussion

In this study, the peer relationships of preschool children with special needs were compared with their peers without special needs, whether the variable of being with special needs predicts the peer relationship of children was determined, and the peer relationships of children with special needs were examined in terms of the gender and age variables. As a result of the study, statistically significant differences were observed between the scores of children with and without special needs in the subdimensions of prosocial behaviors, asocial behaviors, anxious-fearful behaviors, and hyperactivity behaviors, but there were no differences between the aggression and exclusion behaviors sub-dimension scores. It is observed that being with special needs significantly predicts prosocial behaviors in favor of children without special needs, and aso-

cial, anxious-fearful and hyperactivity behaviors in favor of children with special needs. Furthermore, it was determined that the gender and age variables do not create a statistically significant difference in the peer relationships of children with special needs. In the first research question of the study, whether there was a difference in the subscale scores of the peer relationships of children with special needs according to the gender was examined, and any significant difference between the subscale scores of boys and girls was not determined. This result does not coincide with the results of many studies in the literature (Gülay, 2008; Gülay, 2011b; Salı, 2014; Walker, 2004; Walker, 2005; Tallandi, 2004; Walker, Bertelsen & Irwing, 2001; Crics, Casas & Mosher, 1997; Fabes, Shephard, Guthrie & Martin, 1997; Uluyurt, 2012; Yoleri & Seven, 2014). Studies in the literature, contrary to the results of this study, indicated that boys display aggressive and detrimen-

tal behaviors more often than girls, they exhibit prosocial behaviors less frequently, they have higher scores than girls in physical aggression, they are more reactive and repressive than girls, they are more prone to physical aggression and they are more likely to exhibit problem behaviors caused by temperament. On the other hand, the findings of this study were supported by the study conducted by Yüce (2015), and it was concluded that there was not a statistically significant difference in the peer relationships of children with and without special needs according to gender.

In the second research question of the study, whether there was a difference in the subscale scores of the peer relationships of children with special needs according to age was examined, and any significant difference between the subscale scores of five and six-year-old children was not determined. When the results of the studies in the literature on children without special needs are investigated, it is observed that Gülay (2011b) concluded that asocial behaviors, exclusion behaviors, and hyperactivity behaviors differ by the age variable. However, in the same study, Gülay (2011b) concluded that there was no difference in terms of prosocial behaviors, anxious-fearful behaviors, and aggressive behaviors according to the age variable. Yoleri & Seven (2014) determined in their study that the age variable did not cause a significant difference in the prosocial behavior scores of normally developed children. In another study, a significant difference was determined between the scores of normally developed 5-6-year-old children in terms of being anxious-fearful against the peers, which is one of the sub-dimensions of the CBS, but a difference was not observed in the other sub-dimensions which are prosocial behaviors, asocial behaviors, aggressive behaviors, exclusion behaviors and hyperactivity behaviors (Salı, 2014). The results of the study are parallel to the results of the study indicating that there is no significant relationship between children's aggressive behaviors and age groups (Persson, 2005; Uluyurt, 2012). It is observed that the studies investigating the peer relationships of children with special needs in terms of the age variable have different results from each other. In a study conducted by Yüce (2015), it was concluded that while there was a difference between the 5 and 6-year-old children's prosocial behaviors according

to the age variable, significant differences were not determined between the other friendship behaviors, which are aggression, asocial behaviors, anxious-fearful behaviors, exclusion behaviors and hyperactivity behaviors, according to age. In this study, there was no significant difference in the peer relationships of children with special needs according to age groups. This result is not consistent with the findings of many studies in the literature (Gülay, 2011b; Salı, 2014).

In the third research question of the study, whether the peer relationships of children differed according to being with special needs was examined. As a result of the study, it was found out that the prosocial behaviors' scores of the children with special needs were significantly lower than those of their peers without special needs. According to this result, it can be stated that children with special needs display less helpful, sharing and cooperative behaviors to their peers. The results of the study are similar to the results of the studies which state that there is a significant difference between the social behaviors of children with special needs who aim to help their peers without special needs (Sucuoğlu & Özokçu, 2005; Çulhaoğlu-İmrak & Sığırmaç, 2011). The studies indicate that the prosocial behaviors of children with special needs are more limited compared to their peers without special needs.

As a result of the study, it was found out that the asocial behaviors of children with special needs were significantly higher compared to their peers without special needs. This result of the study is in line with the results of the study indicating that children with special needs display alone, timid, non-sharing, and non-supportive behaviors compared to children without special needs (Deschamps, Schutter, Kenemans & Matthys, 2014). Taylor, Asher & Williams, (1987) described the asocial behaviors of children with special needs as more timid, shyer, more introverted, less cooperative and less friendly in comparison with their peers without special needs.

As a result of the study, it was determined that the anxious-fearful behaviors of children with special needs were significantly higher compared to their peers without special needs. This result of the study shows similarities with the results of the studies indicating that children with special needs exhibit unhappy, anxious, troubled,



weeping, shy, fearful behaviors in comparison with children without special needs (Saylor & Leach, 2008; Yüce, 2015). The studies suggest that being anxious-fearful may result in child's being rejected and excluded by the peers, but it may also occur as a result of rejection by peers for different reasons, such as aggression (Harrits et al., 1997). However, being anxious-fearful may increase the probability of children to be exposed to peer violence (Ladd & Profilet, 1996).

As a result of the study, it was indicated that the hyperactivity of children with special needs was significantly higher compared to their peers without special needs. This result is in line with the results of many studies in the literature (Akalın, 2007; French & Waas, 1985; Sater & Frech, 1989; Sucuoğlu & Özokçu, 2005; Yüce, 2015). In the literature, it is stated that when children with special needs are compared with their peers without special needs, they are more active and hasty, they can not stand in their places, they can not keep motionless, they are careless and untidy (Sucuoğlu & Özokçu, 2005; Yüce, 2015).

In this study, a statistically significant difference was not found out between the subscale scores of aggressive and exclusion behaviors of children with and without special needs. A significant difference was not found between the aggressive behaviors of children with and without special needs towards their peers. This result is in line with the study of Taylor et al., (1987) which reported that the destructive and aggressive behaviors of children with special needs were not different from their peers without special needs. On the other hand, this result does not coincide with the results of many previous studies (Akalın, 2007; Sucuoğlu & Özokçu, 2005; Yüce, 2015). As in aggressive behaviors, there was no significant difference also in exclusion behaviors between children with and without special needs. In other words, in this study being with special needs did not lead to a difference in exclusion behavior. However, upon examining the literature, in contrast to the results of this study, many studies state that children with special needs are more excluded than their peers without special needs (Baydık & Bakkaloğlu, 2009; Sucuoğlu & Kargin, 2006; Şahbaz, 2004; Yüce, 2015).

In the fourth research question of the study, whether being with special needs significantly predicts the peer relationships

of children with and without special needs was examined, and it was determined that being with special needs significantly predicts prosocial behaviors in favor of children without special needs. This result suggests that being with special needs may have a direct effect on the prosocial behaviors of these children. This results of the study is consistent with the results of many studies in the literature (Deschamps et al., 2014; Guralnick et al., 1996a; 1996b; Guralnick, et al., 2006; Roberts & Zubrick, 1992; Taylor et al., 1987), which indicates that children with special needs exhibit less prosocial behaviors, have less social interaction, and exhibit more negative interaction styles, when their prosocial behaviors are compared with their peers without special needs. Again, being with special needs significantly predicts asocial behaviors, anxious-fearful behaviors, and hyperactivity behaviors separately in favor of children with special needs. This result indicates that in preschool classes where inclusive practices are carried out, providing training to teachers on knowledge and skill teaching in the subject of the reduction of problem behaviors and teaching social skills is inevitable. On the other hand, the results of the study indicated that being with special needs did not significantly predict the aggressive and exclusion behaviors of children. This result does not coincide with the results of the studies conducted by Sucuoğlu & Özokçu 2005; Akalın, 2007; Şahbaz, 2007; Yüce, 2015, which indicate that children with special needs are more excluded and more rejected than their peers. This result suggests that different variables (social skills, social position, language skills, etc.) may play a role in the exclusion of children with special needs by their peers, and in their aggressive behaviors towards their peers.

As a result of this study, which was planned to examine the peer relationships of children in preschool inclusive environments in terms of being with special needs, age and gender variables, it was observed that the peer relationships of children with special needs significantly differed from their peers without special needs. The fact that among the variables which can affect the peer relationships of preschool children the variables related to the child (social skills, problem behaviors, self-regulation, temperament and preschool education duration), the family (child-rearing attitudes, relationship between parents and children,

communication with children, and family structures), the teacher (education, attitudes, experience, self-efficacy) and school (curriculum, class size, support for teachers) were not included in this study can be stated as the limitation of the study. According to the results obtained, variables which are related to the child, school, and family and which can affect the peer relationships of preschool children should be examined with different assessment methods, and the variables affecting and predicting the peer relationships of children should be determined by cross-sectional or longitudinal studies. It can be suggested to develop effective intervention programs which will increase the peer acceptance of children with special needs in preschool inclusive environments and to examine the effectiveness of these programs. The use of effective intervention programs for improving the peer relationships and social acceptance of children with and without special needs in preschool inclusive environments is considered necessary. Furthermore, for the success of inclusive practices, to provide social skills training to children with and without special needs and to include supporting social acceptance in the pre-service and in-service teacher education are important.

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